expressing said nucleic acid molecule or capable of causing the expression of said nucleic acid molecule in a separate target cell, and wherein said recombinant attenuated Salmonella cell is capable of inducing protective immunity.–

--25. The cell according to claim 24, wherein said cell is a Salmonella aro mutant cell.–

--26. The cell according to claim 24, wherein said nucleic acid molecule encoding a Helicobacter immunogen is phase variably expressed.–

--27. The cell according to claim 26, wherein said nucleic acid molecule encoding the Helicobacter immunogen is under the control of an expression signal which is substantially inactive in the Salmonella cell and which is activated by a nucleic acid reorganization caused by a nucleic acid reorganization mechanism in the Salmonella cell.–

--28. The cell of claim 27, wherein the expression signal is a bacteriophage promotor, and the activation is caused by a DNA reorganization resulting in the production of a corresponding bacteriophage RNA polymerase in the Salmonella cell.–

--29. The cell according to claim 24, further comprising at least one second nucleic acid molecule encoding an immunomodulary polypeptide, wherein said Salmonella cell is capable of expressing said second nucleic acid molecule.–

--30. A method for the preparation of a living vaccine comprising providing the salmonella cell of claim 24 and formulating the cell in a pharmaceutically effective amount for inducing protective immunity against Helicobacter with pharmaceutically acceptable diluents, carriers or adjuvants.–

--31. A method for preparing a recombinant attenuated Salmonella cell according to claim 24, comprising the steps:

a) inserting a nucleic acid molecule encoding a Helicobacter immunogen into an attenuated Salmonella cell, wherein said Helicobacter immunogen consists of urease A and urease B or immunologically reactive fragments of urease A and urease B, and wherein a recombinant attenuated Salmonella cell is obtained which expresses said nucleic acid molecule or causes expression of said nucleic acid molecule in a separate target cell, and

b) cultivating said recombinant attenuated Salmonella cell under suitable conditions.–

F'

--32. The method according to claim 31, wherein said nucleic acid molecule encoding a Helicobacter immunogen is located on an extrachromosomal plasmid or inserted in the chromosome.–

--33. A pharmaceutical composition which is a living vaccine, comprising as an active agent a recombinant attenuated cell according to claim 24, together with a pharmaceutically acceptable diluent, carrier or adjuvant.–

--34. The composition according to claim 33, wherein said composition is in a form suitable for administration to a mucosal surface.–

--35. The composition according to claim 33, wherein said composition is in a form suitable for administration via a parenteral route.–

--36. A method for treating an infection by Helicobacter pylori, comprising administering at least once, to a patient a composition comprising the cell according to claim 24 in a pharmaceutically effective amount for inducing protective immunity.–

--37. A method of preventing an infection by Helicobacter pylori, comprising administering to a patient a composition comprising the cell according to claim 24 in a pharmaceutically effective amount for inducing protective immunity against Helicobacter pylori.–

--38.The method according to claim 36, wherein the composition is administered as a single dose.–

F'

--39. A method of inducing protective immunity against a Helicobacter infection in a mammalian host comprising administering to a mammalian host in need of protective immunity an effective amount of the cell according to claim 24.--